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10/676,233

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Edward Y. Qian

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EXAMINER

CHU, WUTCHUNG

ART UNIT

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2616

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DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/676,233

Applicant(s)

QIAN ET AL.

Examiner

Wutchung Chu

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 October 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-42 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,6-8,10-16,19-26,29 and 32-42 is/are rejected.
- 7) ☒ Claim(s) 2-5,9,17,18,27,28,30 and 31 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>5/11/2005</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Regarding claims 34-42, the claims are "computer program" per se is not a "physical thing" and does not falls into one of the four statutory classes of invention: process, machine, manufacture, or composition of matter. Therefore, claims are not statutory.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 34-42 are rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure which is not enabling. "computer program" critical or essential to the practice of the invention, but not included in the claim(s) is not enabled by the disclosure. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976).

Regarding claims 34-42, "computer program" is not enabled by the disclosure.

Claim Rejections - 35 USC § 103

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

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1. Determining the scope and contents of the prior art.
 2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1, 6-8, 11, 14-16, 19-20, 22-26, 29, 32-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carew et al. (US6879667) in view of Matthews et al. (US2007/0083528).

Regarding claim 1, Carew et al. disclose a system and method for interfacing telephony voice signals with a broadband access network (**see Carew et al. column 1 line 43-46**) comprising:

at a media gateway for switching voice packets between a plurality of input ports and output ports (**see Carew et al. column 1 line 55-56 a plurality of telephony port modules that receive telephony voice signals**);

(a) pooling voice server resources provided by a plurality of voice chips in the media gateway (**see Carew et al. column 5 line 37-40 and figure 2 ref. 110**);

(b) for each new call/session, dynamically allocating a voice chip from the pooled voice server resources (**see Carew et al. column 5 line 47-51**);

(d) receiving a plurality of voice packets relating to a call/session from a plurality of different external networks and sending a plurality of voice packets relating to the

call/session to the external networks (**see Carew et al. figure 1 box 92a –c and column 5 line 16-35**); and

(e) processing voice packets associated with each session using the voice chip dynamically assigned to the session (**see Carew et al. column 5 line 40-56**).

Regarding claim 1, Carew et al. disclose all the subject matter of the claimed invention with the exception of (c) dynamically assigning a logical resource identifier to each session. Matthews et al. from the same or similar fields of endeavor teaches the use of assigning locally unique ID (**see Matthews et al. paragraph 61**). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to use the assigning locally unique ID as taught by Matthews et al. in the system and method for interfacing telephony voice signals with a broadband access network of Carew et al. in order to provide an efficient routing system.

Note: the phrase “capable of” or “adapted to” recited in claim 2 line 5, claim 20 line 1, claim 21 line 1, claim 22 line 1, claim 29 line 1, claim 32 line 1, and claim 33 line 1 do not positively support claim limitations, therefore, the limitation after these phrases will not be considered as claimed limitations.

Regarding claim 8, Carew et al. teaches dynamically receiving via call signaling channel (**see Carew et al. column 1 line 54-57**) or learning at run-time a remote IP address and a remote UDP port representing a remote endpoint corresponding to each session.

Regarding claim 11, Carew et al. teaches processing the voice packets associated with each session using the voice chip dynamically assigned to each session includes performing at least one of echo cancellation (**see Carew et al. column 4 line 18**), transcoding, tone detection and generation, announcement playout, media recording, and conference bridging.

Regarding claim 14, Carew et al. teaches comprising routing outbound packets associated with each session over a network interface card (**see Carew et al. column 6 line 26-51 and figure 5A ref G6**).

Regarding claim 15, Carew et al. disclose all the subject matter of the claimed invention with the exception of comprising selecting an outbound network interface card from a pool of network interface cards.

Matthews et al. from the same or similar fields of endeavor teaches the use of OMORI Object Manager Object Routing and interface to route control information between address spaces based on the location of objects (see Matthews paragraph 57). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the OMORI as taught by Matthews et al. in the system and method for interfacing telephony voice signals with a broadband access network of Carew et al. in order to provide an efficient routing system.

Regarding claim 16, Carew et al. teaches comprising terminating a data link layer connection associated with each session at one of a plurality of network interface cards (**see Carew et al figure 5A G6 PSTN IF and WAN IF**) within the media gateway (**see**

Carew et al figure 5A) and wherein processing voice packets associated with each session using the assigned voice processing resource **(see Carew column 5 line 47-51),**

Regarding claim 16, Carew et al. disclose all the subject matter of the claimed invention with the exception of includes forwarding packets from the network interface card to the voice processing resource using the logical resource identifier assigned to each session and one or more addresses in each received packet.

Matthews et al. from the same or similar fields of endeavor teaches the use of assigning locally unique ID **(see Matthews et al. paragraph 61)**. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to use the assigning locally unique ID as taught by Matthews et al. in the system and method for interfacing telephony voice signals with a broadband access network of Carew et al. in order to provide an efficient routing system.

Regarding claim 19, Carew et al. disclose a system and method for interfacing telephony voice signals with a broadband access network **(see Carew et al. column 1 line 43-46)** comprising:

(a) a plurality of voice chips being pooled in a common resource pool for performing voice processing operations on media packets **(see Carew et al. column 5 line 37-40 and figure 2 ref. 110);**

(b) a plurality of network interfaces coupled to the voice chips for forwarding incoming media packets to the voice chips and forwarding outbound media packets

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from the voice chips to external networks (**see Carew et al figure 5A G6 Wan IF and PSTN IF**); and

(c) a dynamic resource manager operatively associated with the packet interfaces and the voice chips for dynamically allocating voice chips from the common resource pool to process new sessions on a per session basis (**see Carew et al. column 5 line 47-51**).

Regarding claim 19, Carew et al. teaches the voice chips are adapted to perform encoding and decoding (CODEC) operations on the media packets (**see Carew et al. column 2 line 33 and 62- column 3 line 11**).

Regarding claim 22, Carew et al. disclose all the limitations as discussed in the rejection of claims 11 and 19 (system) and is therefore apparatus claim 22 is rejected using the same rationales.

Regarding claim 23, Carew et al. teaches the network interfaces include IP network interfaces (**see Carew et al. figure 1 ref 92a IP**).

Regarding claim 24, Carew et al. teaches the network interfaces include TDM network interfaces (**see Carew et al. figure 5A G6 PSTN IF**).

Regarding claim 25, Carew et al. teaches the network interfaces include at least one of Ethernet, ATM, and MPLS network interfaces (**see Carew et al. figure 1 ref 92b ATM**).

Regarding claim 26, Carew et al. teaches each network interface includes a resource allocation table being dynamically constructed from incoming media packets **(see Matthews et al. paragraph 77 lists of object ids)**.

Regarding claims 29, Carew et al. and Matthews et al. disclose all the limitations as discussed in the rejection of claim 1(c) and is therefore apparatus claim 29 is rejected using the same rationales.

Regarding claims 32 and 33, Carew et al. and Matthews et al. disclose all the limitations as discussed in the rejection of claims 12 and 16 and are therefore apparatus claims 32 and 33 are rejected using the same rationales.

Regarding claims 34-36, Carew et al. and Matthews et al. teaches the use of digital signal processor **(see Carew et al. column 5 line 39 and it is inherent that a processor a executed by a program)** disclose all the limitations as discussed in the rejection of claims 1, 23, and 24 and are therefore apparatus claims 34-36 are rejected using the same rationales.

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 10 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carew et al and Matthews et al. as applied to claim 1 above, and further in view of Castrigno et al. (US6061348).

Regarding claim 10, Carew et al. and Matthew et al. disclose all the subject matter of the claimed invention with the exception of processing the voice packets associated with each session using the voice chip dynamically assigned to each session includes performing segmentation and reassembly (SAR) operations for each session.

Castrigno et al. from the same or similar fields of endeavor teaches the use of fast packet or ATM cell reassembly (**see column Castrigno et al. column 3 line 32-43**). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the fast packet or ATM cell reassembly as taught by Castrigno et al. in the modified system and method for interfacing telephony voice signals with a broadband access network of Carew et al. in order to allow them to transport into different network systems.

Regarding claim 21, Carew et al. and Matthews et al disclose all the limitations as discussed in the rejection of claims 10 and 19 (system) and is therefore claim 21 is rejected using the same rationales.

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carew et al and Matthews et al. as applied to claim 1 above, and further in view of Nassar (US2004/0066782).

Regarding claim 12, Carew et al. and Matthew et al. disclose all the subject matter of the claimed invention with the exception of multicasting session identifiers associated with each session to a plurality of network interface cards in the media gateway.

Nassar from the same or similar fields of endeavor teaches the use of partition is configured as a multicast router (**see Nassar paragraph 91 and figure 6 box 600 Multicast router partition**). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to use the multicast router partition as taught by Nassar in the modified system and method for interfacing telephony voice signals with a broadband access network of Carew et al. in order to allow them to enhance control of management and service running (**see Nassar paragraph 10**).

Regarding claim 13, Carew et al. disclose all the subject matter of the claimed invention with the exception of comprising, in response to failure of a route to one of the network interface cards, routing packets associated with a session to its assigned voice chip over an alternate network interface card.

Matthews et al. from the same or similar fields of endeavor teaches the use of backup Service Blade (**see Matthews paragraph 48 and 49**). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the backup Service Blade as taught by Matthews et al. in the system and method for interfacing

telephony voice signals with a broadband access network of Carew et al. in order to provide backup and guarantee service.

Allowable Subject Matter

11. Claims 2-5, 9, 17-18, 27-28, 30-31 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Sin et al. (US2002/0051464) disclose quality of transmission across packet-based networks.

Marquette et al. (7185094) disclose media session framework using a control module to direct and manage application and service servers.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wutchung Chu whose telephone number is 571 270 1411. The examiner can normally be reached on Monday - Friday 1000 - 1500EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wing Chan can be reached on 571 272 7493. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

WC/
Wutchung Chu

Handwritten signature of Wing Chan in cursive script, with the date 6/7/07 written below it.

WING CHAN
SUPERVISORY PATENT EXAMINER